

Claims 8-12 and 14 remain in this application. Claim 13 has been canceled and its limitation added to claim 8. No new subject matter is believed to have been added by this Amendment.

The Applicant's representative hereby thanks the Examiner for the telephone interview of September 28, 2001, at which time the Examiner indicated that the informally presented Proposed Amendment to claim 8 appeared to define over the teaching of the International Publication No. WO 91/10778 to Hodgson, but required further consideration to determine whether or not the Proposed Amendment to claim 8 was sufficient to distinguish over the teaching of United States Patent No. 5,513,797 to Leslie and over the teaching of United States Patent No. 5,165,598 to Ortwein. The Examiner did indicate to the Applicant's representative, however, that a further proposed claim amendment will be discussed with the Examiner's supervisor before a final action on the merits of the claims is written. This Amendment presents such a proposed claim with arguments supporting patentability for that claim.

In Section No. 1 of the Office Action, the Examiner objects to the drawings under 37 C.F.R. § 1.83(a), indicating they must show every feature of the invention specified in the claims and, in particular, that the recitation of the first layer of yielding material as separate from the second layer of yielding material in claim 8 must be shown. The Applicant respectfully draws the Examiner's attention to Figure 1, which illustrates the first layer 9 of yielding material and the second layer 10 of yielding material. Upon inspection, it can be seen that the cross-hatching of the first layer 9 has a different pattern than the cross-hatching of the second layer 10. The same is true for the cross-hatching representative of the first layer 9 and the second layer 10 in Figures 2, 4 and 5. For that reason, the Applicant respectfully disagrees with the Examiner and believes that the first layer of yielding material is shown separately from the second layer of yielding material in the drawings.

In Section No. 3 of the Office Action, the Examiner rejects claims 8 and 10-12 under 35 U.S.C. § 102(b) as being anticipated by the teaching of PCT International Publication No. WO 91/10778 to Hodgson. The Hodgson publication is directed to a tram track, wherein a rail 3 is supported by a compressible base body comprised of an elastomeric polymeric grouting compound or glue 8. The compound 8 surrounds the rail 3 and rests upon a resilient pad 7. However, the grouting compound 8 extends around both the bottom and the sides of the rail 3, and it is apparent that the stiffness in the horizontal direction provided by the second layer on each side surface is less than the stiffness provided in the vertical direction by the first layer of the resilient material. Additionally, the Hodgson publication is discussed on page 2, lines 11-19 of the subject application, where it is indicated that the casting mass created by the polymer material acts as a reflector for the sound radiated by the rail and the casting mass begins to function as an extra source of noise.

In contrast, one purpose of the subject invention is to provide an arrangement whereby sound damping is increased. To accomplish this, as discussed on page 3, lines 13-26 of the subject application, the stiffness of both the first layer of material and the second layer of material is preferably as high as possible so that maximum dissipation of sound can be obtained. As stated in column 1, lines 25-28, railway regulations require that the rails must undergo a displacement of 1.5 to 2.5 millimeters at an axle load of 22.5 tons. Therefore, the stiffness in a vertical direction is bounded by the regulation of the railway companies while, for the horizontal direction, the stiffness of the second layer is bounded only by the fact that this layer must still be able to shear sufficiently to allow the required vertical displacement. Therefore, it is advantageous for the second layer of material to have a greater stiffness than the first layer of material and, it is to this feature, among others, that amended claim 8 is directed. Additionally, as specified on page 3, line 36 through page 4, line 2,

improved vibration damping is provided by the first layer and the second layer of material embodied in an interrupted manner.

From an inspection of Figure 1 in the Hodgson publication, there is neither a teaching nor a suggestion of maximizing the stiffness of the resilient material in the horizontal direction to an amount greater than the stiffness in the vertical direction, or to separate the first and second layers of material. To the contrary, the Hodgson publication appears to disclose in Figure 1 an arrangement exactly opposite of this. Furthermore, a layer of resilient material extends around both the bottom and the sides of the rail, thereby producing undesired reflection of sound. For that reason, amended claim 8 is not believed to be anticipated by the teaching of the Hodgson publication and, furthermore, is not believed to be obvious in view of the teaching of the Hodgson publication. Claims 10-12 depend from independent claim 8 and, by their dependence upon what is believed to be a patentably distinct claim over the teaching of the Hodgson publication, are themselves believed to be patentably distinct over the teaching of the Hodgson publication.

In Section No. 4, the Examiner rejects claims 8, 9 and 14 under 35 U.S.C. § 102(b) as being anticipated by the teaching of United States Patent No. 5,165,598 to Ortwein. Just as with the Hodgson publication, the resiliently mounted rail disclosed in the Ortwein patent and illustrated, for example, in Figure 6, does not have a horizontal stiffness greater than the vertical stiffness. In particular, the layer of yielding material 4A is substantially wider than the layer of yielding material at the bottom of the rail 1A. As previously discussed, such an arrangement does not provide the same sound absorption characteristics as an arrangement whereby the horizontal stiffness is greater than the vertical stiffness. Furthermore, unlike the Applicant's invention where, as specified in amended claim 8, the side walls of the channel-like recess are parallel, the arrangement disclosed in the Ortwein patent is significantly different in that the walls are irregularly shaped, so that the elastic

material 4A provides not only lateral support, but also vertical support to the rail 1A. For these reasons, the Applicant does not believe that claim 8, as amended, is anticipated or made obvious by the teaching of the Ortwein patent. Furthermore, claims 9 and 14, by way of their dependence upon independent claim 8, are not believed to be anticipated or made obvious by the teaching of the Ortwein patent.

In Section No. 5, the Examiner rejects claims 8, 9, 13 and 14 under 35 U.S.C. § 102(b) as being anticipated by the teaching of United States Patent No. 5,513,797 to Lesley.

The Lesley patent has a significantly different structural arrangement than that found in amended claim 8 of the Applicant's invention. In particular, with respect to the Lesley patent, the first layer of yielding material, which extends under a bearing surface, is a sealing and bonding layer 19 under the flanged portion of the rail 11, as illustrated in Figure 4. There is no resilient material that provides stiffness in the horizontal direction, because there is a gap between the rail 11 and the sides of the recess 28 and, from inspection of Figure 4, the rail 11 actually abuts the corner of the slab 25. This abutment provides the horizontal stiffness. Resilient material 18 is intended only as a sound absorbing layer. Additionally, to the extent that the portion of the rail 11 below the sealing and bonding layer 19 may encounter horizontal displacement, the horizontal stiffness provided by the resilient material 18 appears to be much lower than the vertical stiffness provided by sealing and bonding layer 19. Finally, to the extent that the resilient material 18 may be considered to be the first layer providing a vertical stiffness, and the second layer providing a horizontal stiffness, then the material for the first layer of resilient material and the second layer of resilient material are identical and the rail 11 is, for the most part, enclosed by a single material which, as discussed on page 2, lines 3-11 of the Applicant's invention, has the drawback that the rail begins to radiate sound because the casting mass acts as a reflector for the sound radiated by the rail and because the casting mass begins to function as an extra source of sound.

To distinguish claim 8 even further from the teaching of the Lesley patent, claim 8 has been amended to specify that the foot of the rail is at the bottom of the rail and, consistent with that, the first layer of material is also at the bottom of the rail.

For these reasons, claim 8, as amended, is not believed to be anticipated or made obvious by the teaching of the Lesley patent. Furthermore, claims 9, 13 and 14, which depend from claim 8, are also not believed to be anticipated or made obvious by the teaching of the Lesley patent.

In view of the foregoing, it is believed that claims 8-12 and 14 are patentable over the prior art of record. Reconsideration of the rejections and allowance of claims 8-12 and 14 are respectfully requested.

Respectfully submitted,

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CHANGES TO THE CLAIMS SHOWN USING REVISION MARKS

IN THE CLAIMS:

Please amend claim 8 as follows:

8. (~~Twice~~Thrice Amended) A rail track comprising at least one rail supported by a non-compressible, concrete base body, with the base body provided with a channel-like recess for receiving the rail such that a running surface of a head of the received rail lies free, with a bottom of the channel-like recess provided with a first layer of yielding material which extends under a bearing surface of a foot at the bottom of the rail, with rail side surfaces between the running surface and the bearing surface of the rail, wherein each rail side surface is covered with a second layer of yielding material, wherein stiffness provided in the horizontal direction by the second layer on each side surface is greater than stiffness provided in the vertical direction by the first layer, wherein the bottom of the channel-like recess fully supports the rail and the side walls of the channel-like recess are parallel and wherein the first layer of yielding material ~~is separate from the second layer of yielding material~~ and each of the second layers of yielding material are separate from one another.

Please cancel claim 13.

~~13. — The rail track as claimed in claim 8, wherein the first and/or second layer of yielding material is interrupted.~~